



by **Schneider** Electric

## I N S T A L L A T I O N

# **DX4500/DX4600 Digital Video Recorder**



**Hard Disk Drive**

**C2676M-A (8/09)**

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# Important Safety Instructions

Be sure to read familiarize manual and all safety instructions and before proceeding with the HDD installation.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
7. Only use attachments/accessories specified by the manufacturer.
8. Installation should be done only by qualified personnel and conform to all local codes.
9. **CAUTION:** These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
10. Only use replacement parts recommended by Pelco.
11. The unit must be properly shut down and turned off to install the system and video data drive.

**WARNING:** It is critical that the DX4500/DX4600 be unplugged for your safety. You must remove the power cord because current continues to flow through the DX4500/DX4600 even when the unit is off. First, unplug the power cord from the wall socket, then unplug it from the rear of the DVR.

12. Make sure you protect the unit and its components from electrostatic discharge (ESD).

The product and/or manual may bear the following marks:



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

## CAUTION:

RISK OF ELECTRIC SHOCK.  
DO NOT OPEN.



**WARNING:** This product is sensitive to Electrostatic Discharge (ESD). To avoid ESD damage to this product, use ESD safe practices during installation. Before touching, adjusting or handling this product, correctly attach an ESD wrist strap to your wrist and appropriately discharge your body and tools. For more information about ESD control and safe handling practices of electronics, please refer to ANSI/ESD S20.20-1999 or contact the Electrostatic Discharge Association ([www.esda.org](http://www.esda.org)).



The materials used in the manufacture of this document and its components are compliant to the requirements of Directive 2002/95/EC.



This equipment contains electrical or electronic components that must be recycled properly to comply with Directive 2002/96/EC of the European Union regarding the disposal of waste electrical and electronic equipment (WEEE). Contact your local dealer for procedures for recycling this equipment.

# Description

This manual describes how to replace, upgrade, or install a new hard disk drive (HDD) in the DX4500/DX4600 Series digital video recorder (DVR). Before you install the hard drive, familiarize yourself with all the instructions in this manual.

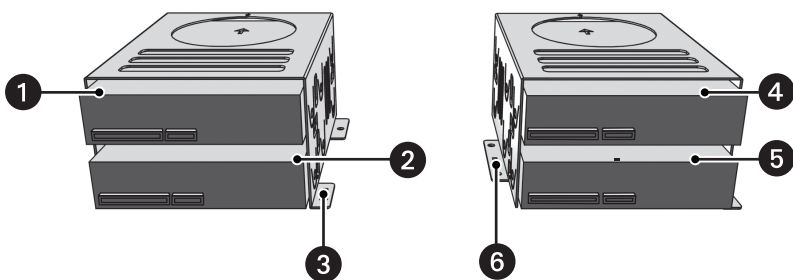
The DX4508/DX4516 supports two HDDs and the DX4608/DX4616 supports four HDDs. Refer to the DX4500/DX4600 product specification for the storage capacity for each model.

## BEFORE YOU BEGIN

**DX4500/DX4600 DVRs shipped without HDDs installed:** To record video, you must first install at least one HDD.

**DX4500/DX4600 DVRs shipped with HDDs installed:** If your unit was shipped with an HDD and data is stored on at least one HDD, make sure the drives are reinstalled in the same locations and connected to their original SATA connectors.

**NOTE:** Hard disk drives are installed in a specific order at the factory (refer to Figure 1). When removing an HDD, be sure to label the drive to ensure that it is reinstalled in the same location.

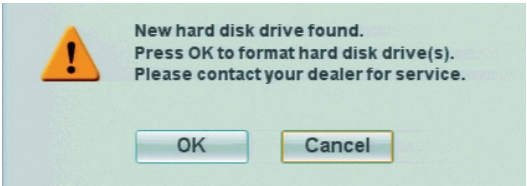


**Figure 1.** Installation Order of HDDs

- 1 HDD 1:** Connects to the SATA 1 connector
- 2 HDD 2:** Connects to the SATA 2 connector
- 3 Mounting Basket A**
- 4 HDD 3:** Connects to the SATA 3 connector (supported for DX4600 only)
- 5 HDD 4:** Connects to the SATA 4 connector (supported for DX4600 only)
- 6 Mounting Basket B**

If you reinstall the HDD in a different location, the “New hard disk drive found” dialog box opens when the unit is restarted. It asks you to format the HDD (refer to Figure 2).

If you select OK, you will reformat the HDD, erasing all stored data. To avoid reformatting the HDD, click Cancel.



**Figure 2.** New Hard Disk Drive Found Dialog Box

# PARTS LIST AND TOOLS

Qty	Description
1	Hard disk drive
1	Serial ATA (SATA) cable for connecting the HDD to the motherboard
1	ESD disposable wrist strap
2	Mounting screws for securing the HDD to the mounting basket
1	Installation manual

To install the HDD, you will also need a nonmagnetic Phillips screwdriver #1 and an optional small container to store screws (not supplied).

# Installing a Hard Disk Drive

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**NOTE:** The security surveillance service provided by the DX4500/DX4600 is interrupted when the unit is taken offline.

1. Properly shut down the DX4500/DX4600 Series DVR. Refer to the manuals supplied with the unit.
2. Unplug the power cord from the wall socket.



**WARNING:** It is critical that the unit be unplugged for your safety. You must remove the power cord because current continues to flow through the DX4500/DX4600 even when the unit is without power. First, unplug the power cord from the wall socket, then unplug it from the rear of the DVR.

3. Remove the power cord from the back of the unit.
4. Disconnect any cables or connections that may restrict access or interfere with the removal of the unit.
5. If the DX4500/DX4600 is mounted in a rack, remove it from the rack before installing an HDD. One person can lift and remove the DVR.

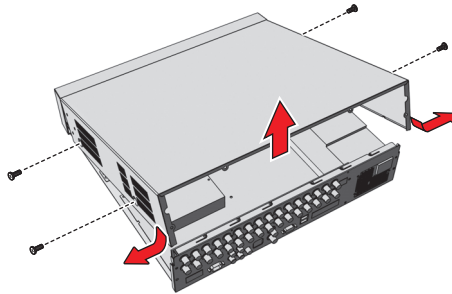


**WARNING:** The chassis assembly includes parts with sharp edges. To avoid injury, use caution when working in and around the chassis and components.

- a. Unscrew the fasteners that secure the unit in the rack and carefully lift it out of the rack.
- b. Move the DX4500/DX4600 to an area that will provide full access to its internal components.

## OPENING THE CHASSIS

1. Make sure you protect the unit and its components, which are susceptible to damage from improper handling and ESD. Refer to the Safe Handling of Hard Drives document for more information.
2. Using a Phillips screwdriver, remove the chassis cover:
  - a. Remove the two screws on the left and right side panels of the DVR (refer to Figure 3).



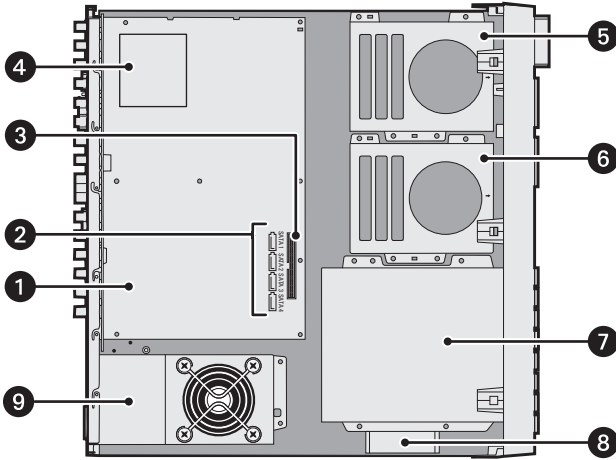
**Figure 3.** Removing the Chassis Cover

- b. Remove the four screws on the rear panel that fasten the cover to the unit.

**NOTE:** The screws on the back of the unit are not shown in Figure 3.
- c. Carefully remove the chassis cover by sliding it back and up. Set aside the cover.

# INTERIOR COMPONENT LAYOUT

Refer to Figure 4 for information about the DX4500/DX4600 layout of major components.



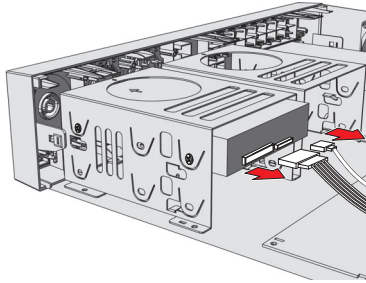
**Figure 4.** Layout of Major Components

- 1** System Board
- 2** SATA 1–4 Connectors
- 3** CD/DVD System Board Cable
- 4** Coaxitron® Daughter Board
- 5** Mounting Basket (holds SATA drives 1 and 2)
- 6** Mounting Basket (holds SATA drives 3 and 4 for DX4608/DX4616)
- 7** CD/DVD Drive Location (mounting bracket supports one CD or DVD drive)
- 8** Chassis Exhaust Fan
- 9** Power Supply



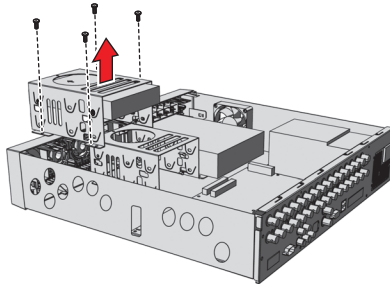
## REMOVING THE MOUNTING BASKET

1. If HDD drives are already installed, disconnect the SATA HDD power connector and data cable (refer to Figure 5):
  - a. Grasp the top and bottom of the SATA power connector and carefully and simultaneously pull straight back on the connector.
  - b. Grasp each side of the SATA data connector and carefully and simultaneously pull straight back on the connector.



**Figure 5.** Disconnecting the Data and Power Cables

2. Remove the HDD mounting basket (refer to Figure 6):
  - a. Using a Phillips screwdriver, unscrew the four screws that attach the mounting basket to the chassis.
  - b. Gently lift the basket up and out with the drives attached. Be careful not to force the basket free or to disturb other components inside the unit.



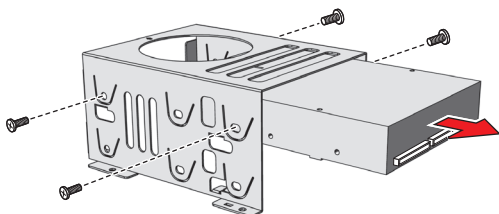
**Figure 6.** Lifting the Mounting Basket

## REMOVING THE HDD

**NOTE:** It is recommended that you do not remove previously installed drives. If you must remove a drive for any reason, be sure to note the locations of the drives within the drive basket. It is critical that you return the drives to their original locations in the DX4500/DX4600.

Remove the HDD (if applicable) from the basket (refer to Figure 7):

1. Using a Phillips screwdriver, unscrew the screws that attach the drive to the basket.
2. Slide the drive out of the basket.

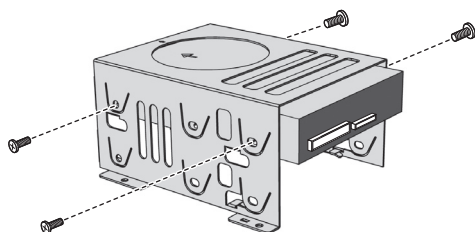


**Figure 7.** Removing the HDD from the Mounting Basket

## INSERTING THE HDD

Insert the HDD in the basket (refer to Figure 8):

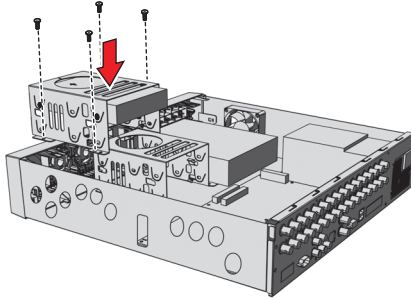
1. Position the drive in the basket.
2. Using a Phillips screwdriver, install the screws to attach the drive to the basket.
3. (If necessary) Repeat steps 1 and 2 for each HDD.



**Figure 8.** Securing the HDD to the Mounting Basket

## REINSTALLING THE MOUNTING BASKET

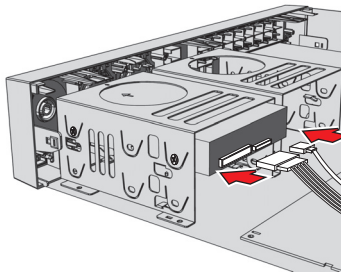
1. Reinstall the HDD mounting basket (refer to Figure 9):
  - a. Gently lower the basket into place. Be careful not to force the basket into place or to disturb other components inside the unit.
  - b. Using a Phillips screwdriver, fasten the four screws that secure the drive basket to the chassis.



**Figure 9.** Replacing the Mounting Basket

2. Reconnect the SATA data and power cables for each HDD (refer to Figure 10):
  - a. Grasp each side of the SATA data connector and carefully and evenly push the connector on to the drive data connector. Ensure that the plug is pushed all the way on to the drive data connector.
  - b. Grasp the top and bottom of SATA power connector and carefully and evenly push the connector on to the drive power connector. Ensure that the connector is pushed all the way on to the power connector.

**NOTE:** Make sure you connect the correct power and data connectors to the correct drives.

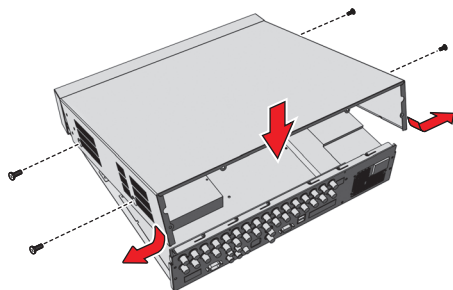


**Figure 10.** Reconnecting the Data and Power Cables

# Reassembling the Unit

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1. Replace the chassis cover using the screws you removed (refer to Figure 11).



**Figure 11.** Replacing the Chassis Cover

2. Attach the silver product label for your upgrade kit to the inside of your unit front door.

**NOTE:** In the event that your unit or its components require service, specific labels must be present and appropriately affixed to the unit's door. Pelco product support personnel use these labels to identify the exact components installed in your system. A separate product label is required for each upgrade component installed on the DX4500/DX4600.


3. Reinstall the unit in the rack enclosure if necessary. Then reconnect all of the cables and peripheral equipment you removed earlier.

To complete the HDD installation, refer to *Formatting* on page 13.

# Formatting

The DX4500/DX4600 automatically detects when a new drive is installed or when a current drive is switched to a different SATA connector. After the DX4500/DX4600 starts, the system prompts you to format the newly installed drive. Drives that have not been switched to a different SATA connector are not reformatted.

**WARNING:** Before initiating a format procedure, verify that you reinstalled the drives in their original locations and reconnected their original SATA connectors. For more information, refer to *Before You Begin* on page 4 and the DX4500/DX4600 server operation/programming manual.

1. On the front panel or remote control, press and hold the Power button  until you hear a beep, and then release the button. After a few seconds, the DX4500/DX4600 startup screen appears.
2. Wait until the DVR displays the "HDD configuration has been changed" dialog box.



**Figure 12.** Application Window and GUI Toolbar

3. Click OK to format the newly installed HDDs. The "Hard disk drive recovery in progress" dialog box appears. To cancel the formatting process, click Cancel.
4. When the "Hard disk drive recovery complete" dialog box appears, click OK. The application window appears.

## REVISION HISTORY

Manual #	Date	Comments
C2676M	9/07	Original version.
C2676M-A	8/09	Updated the ESD section and reorganized the manual into the current style.

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# PRODUCT WARRANTY AND RETURN INFORMATION

## WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship **for a period of one year** after the date of shipment.

Exceptions to this warranty are as noted below:

- Five years:
  - Fiber optic products
  - TV3000 Series unshielded twisted pair (UTP) transmission products
  - CC3701H-Z, CC3701H-2X, CC3751H-Z, CC3651H-2X, MC3651H-Z, and MC3651H-2X camera models
- Three years:
  - Pelco-branded fixed camera models (CCC1390H Series, C10DN Series, C10CH Series, IP3701H Series, and IX Series)
  - EH1500 Series enclosures
  - Spectra<sup>®</sup> IV products (including Spectra IV IP)
  - Camclore<sup>®</sup> Series (IS, ICS, IP) integrated camera systems
  - DX Series digital video recorders, DVR5100 Series digital video recorders, Digital Sentry<sup>®</sup> Series hardware products, DVX Series digital video recorders, and NVR300 Series network video recorders
  - Endura<sup>®</sup> Series distributed network-based video products
  - Genex<sup>®</sup> Series products (multiplexers, server, and keyboard)
  - PMCL200/300/400 Series LCD monitors
- Two years:
  - Standard varifocal, fixed focal, and motorized zoom lenses.
  - DF5/DF8 Series fixed dome products
  - Legacy<sup>®</sup> Series integrated positioning systems
  - Spectra III<sup>™</sup>, Spectra Mini, Spectra Mini IP, Esprit<sup>®</sup>, ExSite<sup>®</sup>, and PS20 scanners, including when used in continuous motion applications.
  - Esprit Ti and Ti2500 Series thermal imaging products
  - Esprit and VVV5700 Series window wiper (excluding wiper blades).
  - CM6700/CM6800/CM9700 Series matrix
  - Digital Light Processing (DLP<sup>®</sup>) displays (except lamp and color wheel). The lamp and color wheel will be covered for a period of 90 days. The air filter is not covered under warranty.
  - Intelli-M<sup>®</sup> eIDC controllers
- One year:
  - Video cassette recorders (VCRs), except video heads. Video heads will be covered for a period of six months.
- Six months:
  - All pan and tilts, scanners, or preset lenses used in continuous motion applications (preset scan, tour, and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to a Pelco designated location. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental, or consequential damages (including loss of use, loss of profit, and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, sales order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product that does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

## RETURNS

To expedite parts returned for repair or credit, please call Pelco at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair) and designated return location.

All merchandise returned for credit may be subject to a 20 percent restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid

12-23-08

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